

REMARKS

Claims 1-16, 37-50, 51-66, 85-90, and 99-101 are pending, with claims 1-16 and 51-66 rejected, and claims 37-50 and 85-90 withdrawn from consideration.

Each of independent claims 1 and 51 have been amended, and dependent claims 99-101 have been added. Support may be found in the published application in paragraph 99, for example. No new matter has been added.

Claims 1-16 and 51-66 remain rejected under 35 U.S.C. § 102(e) as being anticipated by Sharrit et al. (U.S. Patent No. 5, 999,990; hereinafter “Sharrit”).

Amended independent claim 1 recites “In a processor having a plurality of kernel planes with a plurality of kernels for processing data in a communication device, at least one kernel of the plurality of kernels comprising: ... a local controller ... permitting the at least one kernel to operate autonomously.” Thus claim 1 requires distributed control. The at least one kernel operates autonomously, not only with respect to other kernels, but also with respect to all other circuitry.

In contrast, Sharrit is directed to a communicator 10, which includes a centralized controller 16 that configures a plurality of reconfigurable resource units (RRUs) 12. The RRUs 12 do not operate autonomously, but are instead controlled by controller 16. Sharrit thus has centralized control in its controller 16, as opposed to the claimed distributed control.

More specifically, as illustrated in Fig. 3 of Sharrit, an RRU 54 can include a general purpose processor (GPP) 48 and a field programmable gate array (FPGA) 50. To configure the FPGA 50, the GPP 48 delivers a configuration file to an input of the FPGA 50. The GPP 48 is coupled to the controller 16 for receiving instructions on how to process a signal on bus 14. In response to the instructions, the GPP 48 delivers a control signal to FPGA 50 instructing it to read the signal on signal bus 14 and to process the signal in an appropriate area of the cell array. Thus it is clear that there is centralized control in controller 16.

Alternatively, as illustrated in Fig. 4 of Sharrit, an RRU 58 can include both hardware and software programmability. That is, RRU 58 includes a GPP 60, an FPGA 62, a DSP 64 with associated RAM 66, and a multiplexer 68. RRU 58 is a hybrid unit which allows controller 16 to specify whether a signal currently on signal bus 14 will be processed in hardware (in FPGA 62) or in software (in DSP 64). Based on commands from controller 16, GPP 60 delivers a select signal to multiplexer 68 that directs the signal on bus 14 to the desired processing unit. Also, as indicated by the arrows, the GPP 60 configures the FPGA 62 or the DSP 64 to run certain software modules. Again, there is centralized control in controller 16.

Thus independent claim 1, along with dependent claims 2-16, is patentable over Sharrit for at least this reason.

Amended independent claim 51 similarly recites “A computer readable medium containing therein computer readable codes that enable an electronic device to access at least one kernel architecture of a plurality of kernel architectures in one of a plurality of kernel plane architectures, the method comprising: ... a local controller architecture ... permitting the at least one kernel architecture to operate autonomously with respect to other of the plurality of kernel architectures.

Thus independent claim 51, along with dependent claims 22-66, is patentable over Sharrit for the same reason as discussed above for independent claim 1.

New dependent claim 99 more definitively recites that the “local controller permits the at least one kernel to operate autonomously with respect to the other of the plurality of kernels and any other circuitry within the *processor*.” The at least one kernel operates autonomously, not only with respect to other kernels, but also with respect to all other circuitry within the processor.

Similarly, new dependent claim 101 more definitively recites that the “local controller permits the at least one kernel to operate autonomously with respect to the other of the plurality of kernels and any other circuitry within the *electronic device*.” The at least one kernel operates

autonomously, not only with respect to other kernels, but also with respect to all other circuitry within the electronic device.

New dependent claim 100 further recites that the “local controller permits the at least one kernel to operate autonomously with respect to the other of the plurality of kernels and any other circuitry within the *communication device*.” The at least one kernel operates autonomously, not only with respect to other kernels, but also with respect to all other circuitry within the communication device.

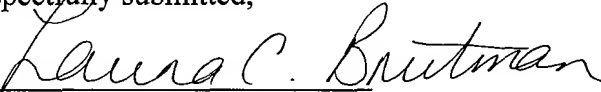
Since dependent claims 99-101 further define how the at least one kernel operates autonomously, these claims are further patentable over Sharrit.

In view of the above, it is respectfully submitted that the pending claims are patentable over Sharrit. Reconsideration and withdrawal of the prior art rejection is therefore respectfully requested.

In the event a fee is required or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge the underpayment to Deposit Account No. 50-2215.

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Respectfully submitted,

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